CHLORINATION

You can use household liquid bleach to kill microorganisms. Use only regular household liquid bleach that contains 5.25 to 6.0 percent sodium hypochlorite. Do not use scented bleaches, color safe bleaches, or bleaches with added cleaners. Because the potency of bleach diminishes with time, use bleach from a newly opened or unopened bottle.

Add 16 drops (1/8 teaspoon) of bleach per gallon of water, stir, and let stand for 30 minutes. The water should have a slight bleach odor. If it doesn't, then repeat the dosage and let stand another 15 minutes. If it still does not smell of chlorine, discard it and find another source of water.

Other chemicals, such as iodine or water treatment products sold in camping or surplus stores that do not contain 5.25 to 6.0 percent sodium hypochlorite as the only active ingredient, are not recommended and should not be used.

DISTILLATION

While the two methods previously described will kill most microbes in water, distillation will remove microbes (germs) that resist these methods, as well as heavy metals, salts, and most other chemicals.

Distillation involves boiling water and then collecting only the vapor that condenses. The condensed vapor will not include salt, or most other impurities. To distill, fill a pot halfway with water. Tie a cup to the handle on the pot's lid so that the cup will hang right-side-up when the lid is upside-down (make sure the cup is not dangling into the water) and boil the water for 20 minutes. The water that drips from the lid into the cup is distilled.

Courtesy of the Town of Elsmere.

BE AWARE OF YOUR WATER QUALITY!
Visit our website at elsmere.delaware.gov

FEMA

This information was taken from the U. S. Department of Homeland Security website: www.fema.gov.

Water Quality Awareness and Treatment Guide

Human activity within a watershed affects how and where storm water runoff flows and also affects the quality of the water. Most storm water runoff affected by human activity eventually ends up in a stream, river, lake, or other water body.

In many disasters, waterways are impacted. Floods can destroy bridges, culverts, roadways and embankments. Debris can clog streams and rivers. Lakes, ponds and even wells can become contaminated with hazardous materials.

Some states have special issues with groundwater quality. Because of the types of soil, they are particularly sensitive to both contamination and changes in water levels.

Flood events, in particular, may affect water quality, therefore, you should have water available in an emergency.

You should have at least a three day supply of water and you should store at least one gallon of water per person per day. A normally active person needs at least one-half gallon of water daily for drinking.

Should you require an alternate water source during an emergency, the following sources are safe or unsafe:

SAFE SOURCES

- Melted Ice Cubes
- Water drained from the water heater (if the heater has not been damaged)
- Liquids from canned goods such as fruit or vegetable juices
- Water drained from pipes.

UNSAFE SOURCES

- Radiators
- Hot water boilers (home heating system)
- Water beds (fungicides added to the water or chemicals in the vinyl may make the water unsafe to use)
- Water from the toilet bowl or flush tank.
- Swimming pools and spas (chemicals used to kill germs are too concentrated for safe drinking but can be used for personal hygiene, cleaning, and related uses).

WATER TREATMENT

Treat all water of uncertain quality before using it for drinking, food washing or preparation, washing dishes, brushing teeth, or making ice. In addition to having a bad odor and taste, contaminated water can contain microorganisms (germs) that cause diseases such as dysentery, cholera, typhoid, and hepatitis.

There are many ways to treat water. None is perfect. Often the best solution is a combination of methods. Before treating, let any suspended particles settle to the bottom or strain them through coffee filter or layers of clean cloth.

Make sure that you have all the necessary materials in your disaster supply kit for the chosen water treatment method.

There are three water treatment methods. They are as follows:

1. Boiling
2. Chlorination
3. Distillation

These instructions are for treating water of uncertain quality in an emergency situation, when no other reliable clean water source is available, or you have used all of your stored water.

BOILING

Boiling is the safest method of treating water. In a large pot or kettle, bring water to a rolling boil for 1 full minute, keeping in mind that some water will evaporate. Let the water cool before drinking.

Boiled water will taste better as you put oxygen back into it by pouring the water back and forth between two clean containers. This will also improve the taste of stored water.